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Food Advertising and The American Consumer

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In 1982, manufacturers of branded food products spent $3.6 billion advertising foods and beverages in consumer-targeted media.[1] Agricultural commodity groups spent an additional $80 million on generic food products in the same media (Morrison, 1984). These expenditures were undoubtedly intended to influence the food choices and consumption patterns of consumers. Yet, most Americans would argue that their purchase decisions are independent of their exposure to media advertisements. They contend that their buying decisions are determined from the traditional demand factors such as income, price, taste, age, and lifestyle. Either food producers, manufacturers and retailers are unaware of this ineffectiveness of advertising or consumers are unwilling to admit their susceptibility to it. Today, we will examine some of the evidence and controversy surrounding food advertising. We will also attempt to show the relevance of food advertising to agricultural economics and perhaps other disciplines as well.

Before examining the evidence and controversies of food advertising, it may be useful to provide some workable definitions of several concepts:

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[1]Media include network and spot (local) television, network radio, major consumer magazines, nationally distributed Sunday newspaper supplements, and billboards.

Advertising--an attempt to increase the dollar sales of a product either by increasing the quantity consumers purchase or by getting consumers to pay a higher price for the product.

Brand advertising--an attempt to expand the sales of a particular company's or producer's brand of product (e.g. Del Monte vs. Dole pineapples).

Generic advertising--an attempt to expand the sales of a particular product without reference to any specific manufacturer (e.g. eggs--"The incredible edible eggs"; Milk--"Its fitness you can drink.").

Food promotion--an attempt to increase sales other than through media advertising. It includes consumer deals, premiums, coupon offers, sample and demonstration programs, and so forth.

Advertising Controversies

Much of the controversy surrounding advertising is rooted in two extreme interpretations of its effect:

Traditional doctrine--maintains that advertising is a form of persuasion that creates product differentiation and allows firms to exercise market power at the consumer's expense.

Recent approach--views advertising as information--an inexpensive means for communicating with large numbers of potential buyers--which stimulates competition and diminishes market power.

Product differentiation may be defined as the extent to which basically similar products vary in quality or other attributes.

For example, to what extent is a "Sprite" soft drink different from a "7-Up"? In a blind taste test, consumers would probably have difficulties distinguishing between the two drinks. However, Sprite is made by Coca-Cola and 7-Up by the 7-Up company. And, through advertising, these two companies are attempting to persuade consumers that one product should be preferred over the other.

Between these two extreme views lie many other theories. Some argue, for example, that the effects of advertising are dependent upon the product. That is, advertising is persuasive for some products and informative for others. As a general rule, this group argues that advertising is probably persuasive for products which are very similar (Del Monte peas vs. Stokley peas) and informative for dissimilar products (Frito Lay potato chips vs. Kroger potato chips).

Others argue that advertising is simply an element of product marketing or selling and it communicates the attributes and availability of products to consumers in the least expensive way. Without advertising, consumers, for example, would incur very high search cost in obtaining informaton on new products. For example, consumers would incur additional transportation costs in traveling from store to store, high opportunity cost for their time, and the risk cost of purchasing an unknown or untried product.

Granted the many views on the effects of advertising, conceptually, how do we evaluate these views from the consumers' viewpoint? Intuitively, we can analyze the impact on consumers with

the graphic shown in figure 1.

Anytime a firm can differentiate its product, this usually represents a barrier to entry into the industry by other firms.[2] In figure 1, DD^1 represents the demand curve for the firm within an industry producing a differentiated product. As illustrated, the existing firm could charge a price as high as P_b without inducing entry into the product group by other firms. (At P_b the demand curve for the potential entrant is $d_b d_b^1$.) The excess of P_b over ac, delineated as w_o, is the cost that the traditional doctrine attributes to the persuasive power of advertising. That is, without advertising, there would be no product differentiation and entry into the product group would occur until the price of the product equaled average production cost.

The group advocating the informative effects of advertising would argue that it is the role or power of advertising that allows entry into a product group. Without advertising, new firms could not enter an industry because too few consumers would be aware of their product to support a profitable production level. In the view of this school of thought, price P_b would not be an entry forestalling price because potential firms could enter this market through advertising. In other words, the price advantages existing firms have are not due to advertising, but to their early entry into the market or product group. Through increased competition,

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[2]Other entry barriers also can exist--absolute cost differences, diseconomies of scale, etc. Here we are assuming that only pure product differentiation barriers exist.

the price P_b would be reduced, say to P_a, and consumers would pay a lower price for their products. Note that if this view is correct, advertising serves to increase the price elasticity of demand and this could have major revenue implications for producers. We will have more to say on this later.

Empirical Evidence

Some economists argue that the effects of advertising are obvious from the price differentials between advertised and unadvertised brands. For example, most major brands are higher priced than private label brands (e.g. Ore-Ida frozen french fries vs A & P fries). Yet, in many instances, consumers are unable to discern any quality differences between the products. In fact, frequently there are no real quality differences.[3] However, is it not possible that consumers derive some utility from "fancied" product differences. (Fancied product differentiations are those due to factors other than product quality--packaging, appeal, and so forth.)

As another example of the effects of advertising, economists point to the higher prices charged for "light" than for "regular" beers. Yet, it costs less to produce light beer than regular beer. Moreover, consumers have been unable to detect any taste differences in blind taste tests. Through celebrity endorsements and other

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[3]On a recent visit to Mann's Potato Chip plant in Washington, D.C., I learned that Mann and Giant Food chips are identical, except, of course, for the packaging. That is, Mann makes Giant Food chips from the same potatoes used for their own chips.

selling efforts, the leading brewers have been able to increase the market share of premium and superpremium beers from about 30 percent of the market in 1970 to 60 percent in 1978 (Mueller, 1978). This is estimated to cost consumers about $400 million per year. Similarly, the soft drink industry, through advertising, has increased its share of all beverages from 14.1% in 1962 to 29.7% in 1982 (Bunch and Kurland, 1984). Yet, the price of soft drinks has increased significantly as compared to some of the other beverages that have decreased in consumption. For example, the price of soft drinks rose 274% between this period while the price of milk increased about half as much, by 144%. Yet, per capita consumption of soft drinks soared 146% over the 20-year period, while milk consumption fell 18% (figures 2 and 3).

As an indication of the persuasive intentions of advertising, advertising critics point to studies which show the low informational content of advertisements. That is, products are frequently endorsed by celebrities to influence their recall potential, but these celebrities communicate very little information about the products.[4] Messages such as "give me a light"; "less filling"; "taste good"; and "refreshing" are commonly communicated; these messages, however, provide no information as to the nutritional value of the products. Shall we then assume that consumers' purchases of these products

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[4] It should be pointed out that studies also have shown that people tend to make worse decisions when faced with more information than less--information overload.

are a function of the celebrity endorsement as opposed to the product characteristics?

Studies have also shown that foods that are heavily advertised appeal mostly to pleasure instincts and in most cases are not high in nutrition. Dussere (1977), for example, concluded from her research that: "The more television viewing children did, the more likely they were to eat heavily-sugared cereals, the more often they ate between meals, the more total snack foods they ate, the more they ate candy and chips, and the more often they ate empty-calorie foods."

There is also evidence to support the positive benefits of advertisements. Some studies have found that advertising permits economies of scale in production and distribution of products. It is viewed as being the most efficient method of marketing--i.e. better than direct selling, displays, and so forth. As producers realize economies of scale in both production and distribution, consumers are benefited through lower product prices. As examples, it has been shown that television services and newspapers are cheaper because of advertising. Indeed, studies have shown that consumers will not buy newspapers unless they contain advertisements--even when papers are offered at the pre-advertising price. The Chicago Sun and PM (New York) newspapers once attempted to spare consumers the nuisance of having to weed through advertisements to ascertain relevant news. Consumers immediately rejected these papers and

demanded a return of advertising. Thus, advertising proponents point to these facts as overwhelming evidence that consumers want and benefit from advertising.

As a variant of this position, some studies have shown that advertising raises both the real income and aspiration of consumers. That is, by providing information about a wider range of goods, advertising raises the real income of consumers. After making their purchases and viewing additional advertising messages, consumers' level of aspiration for additional goods is raised. Thus, they work harder and are able to enjoy more in life than would otherwise be possible under their previous level of aspiration. There is only indirect evidence to support this, but the argument is based on the welfare premise that "more is better." That is, consumers are better off when the range of goods from which they can choose is enlarged.

Studies have shown that food advertising at the retail level not only contains high informational content, but also stimulates competition (Benham, 1972; Bond, 1980). Further, some studies have attempted to verify the often held belief that the level of quality of an advertised good exceeds that of an unadvertised good of the same type. This belief is based on the premise of differential risk exposure. That is, consumers are believed to react much more violently to defective products from a firm which advertises than to similar products from a firm which does not

advertise. In essence, bad news has a greater impact on a well-known firm than on a lesser known firm. Bad news is also believed to be weighed more heavily than good news. A study has shown that the Federal Trade Commission could have greatly reduced cigarette consumption by countering the tobacco industry commercials with commercials indicating the health hazards of smoking.

Advertising and Farm Commodities

Whereas advertisers of branded products are primarily concerned with increasing their market share, advertisers of farm (generic) products are largely concerned with total sales and revenue. Indeed, increased total sales are of concern to farm producers only as a means for increasing total revenue. That is, farm producers benefit little from increased sales of one product that leads to offsetting sales of a second product (producers are assumed to produce both products). When producers are involved in the production of only one advertised products, increased total sales are important, but even more important are the returns to producers. Here we will briefly outline the rationale for generic advertising and promotion of farm products and then examine some of the empirical evidence as to the effectiveness of these efforts.

Rationale for Commodity Programs

Advertising and promotion of farm commodities have been initiated largely to counteract or reverse declining consumption trends (figures 4 and 5). During the past decade, the demand for farm commodities has been adversely impacted by non-farm competing

products (e.g. nondairy products), increased health consciousness of Americans (fattening potatoes), and, most recently, the high value of the dollar. Farm producers and other commodity groups have come to believe that much of the decline in demand for farm products can be curtailed or reversed through successful advertising and promotion. To provide funds for such an effort, programs known as commodity check-off funds have been implemented in which all producers pay into according to their production and/or sales levels. For example, egg producers contribute 5 cents per 30-dozen cases sold. These funds are pooled and used to promote the consumption of the generic product--eggs. Check-off funds generally have mandatory participation clauses, but refunds are granted upon request.

Since part of the reason for reduced demand for farm commodities is believed to be misinformation regarding their nutritional values, educational programs are a large component of commodity programs. Indeed, nutritional education is the sole feature of the wheat Act of 1977.[5] Research is also a major feature of commodity check-off programs. To date, however, only limited expenditures are allocated for research. Indeed, some economists argue that check-off funds would probably be more effective if more research (development of new products) was conducted and fewer expenditures allocated to advertising and promotion. In general, producer groups consider

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[5]Wheat producers are opposed to this limited feature, but they included it in their request to enhance the probability of getting the wheat program approved by congress.

the payoff from research to be more long-run than the short-run payoff that is most desired. Moreover, investment in research is more risky relative to advertising and promotion. As an indication of the distribution of funds, during the most recent twelve months, the American Egg Board spent $3 million on advertising and promotion, but only $225 thousand on research, approximately 7 percent. Similar allocations have been observed for other commodities (Table 1). Have these expenditures on advertising been effective? We now turn to some empirical evidence.

Empirical Evidence

Commodity or producer groups are especially concerned about the returns to their check-off funds. This concern appears to be growing as farm prices and incomes are depressed, exports are diminished and consumption trends continue downward. Economists have conducted many studies to quantify the returns to generic advertising. All the published studies have shown positive returns.

In a 1965 study, Clement, Henderson and Eley found a net return of $1.68 for each dollar invested in generic milk advertising. Thompson (1980) found that farmers receive an average net return of $2.20 for each dollar spent on generic fluid milk advertising. Lee (1983) estimated the net returns to generic grapefruit advertising to be $10.44 per dollar spent. A recent study evaluating the effects of advertising wheat products in Taiwan has found a return of $267 dollars for each $1 of advertising expenditures. Several studies have found the returns to advertising of generic

citrus products to exceed $3 per dollar of expenditures (Chern, 1977; Tilley and Lee, 1981). Studies are currently being conducted to evaluate the effectivenss of generic advertising on dairy products, tomatoes, and potatoes. All of these studies are expected to show positive returns. Yet, producers are reluctantly contributing to many of these check-off funds. This reluctance is expressed in refund rates. During the 1982-83 season, refund rates were 32 percent for cotton; 30 percent for eggs; and 34 percent for wheat. If the above studies indeed verify the effectiveness of advertising, why are producers requesting refunds at an alarming or increasing rate. We now turn to some plausible hypotheses to explain this phenomenon.

Refund Rates--Some Plausible Hypotheses

Most agricultural commodity groups are inclined to believe that advertising is effective in increasing sales. However, they are uncertain as to whether these sale receipts accrue to them. The studies cited above have used ad hoc procedures to estimate returns to producers. It is quite possible that increased demand which has been stimulated by advertising has resulted in higher marketing margins with little or no returns to producers. Secondly, if returns have accrued to producers in the aggregate, the individual returns would probably be too limited to offer convincing evidence as to the effectiveness of advertising.

Another factor appears to be the delayed response between an advertising campaign and the sales response. Commodity groups,

as already alluded to, prefer immediate returns on their check-off funds. The advertising literature, however, suggests considerable lags between consumers' exposure to advertisements and their response to them. A related factor is the threshold level of advertising that is most often needed to counter competitors advertising (soft drinks vs orange juice). Frequently, the check-off rate is insufficient to support the advertising effort that is needed to influence or change consumers' consumption patterns.

Commodity groups also are cognizant of the limitations of advertising programs. For example, most commodity groups are aware of the effects the high value of the dollar is having on U.S. exports potential. These groups recognize that no advertising campaign is going to overcome depressed farm prices which may have resulted from the noncompetitiveness of U.S. products in foreign markets. And while demand expansion in foreign markets is not a significant feature of any generic advertising campaign, foreign outlets for U.S. products greatly enhance the potential for a successful, domestic demand-expansion program.

Some Concluding Comments

Most of the discussion has focused on the effectiveness of advertising in expanding demand, creating product differentiation, or diminishing product differentiation. However, there are public policy issues associated with both generic and branded advertising. For example, what are the effects of advertising on children's values? What is the effect of advertising on obesity? Clearly,

obesity is a significant health problem in the U.S. (Costa, 1983). Moreover, empirical studies show that overeating is the major cause of obesity. Therefore, should the U.S. government be a passive participant in advertising campaigns that encourage people to eat more food? Furthermore, should children be encouraged to drink more Coke because "It's the real thing" when, in fact, other drinks are more nutritional--e.g. fruit juices and milk.

For commodity groups, a major concern has to be the effects of generic advertising on the elasticity of demand at the consumer or retail level. We already know that most farm commodities face an inelastic demand at the farm level. If demand should also become inelastic at the retail level, this could have serious revenue repercussions for agricultural producers. A bountiful harvest of oranges, for example, may result in a tremendous loss of citrus producers in Florida. Such losses could result in significant control of the U.S. citrus market by Brazilian producers. One could only speculate on the long-run implications of increased Brazilian influence.

We must also be concerned about the extent to which advertising has no economic value, but simply persuades or misleads the public. John Kenneth Galbraith (1967) argues that the fact that advertising leads consumers to purchase items that they later regret buying is indicative of suboptimal performance in a market. Indeed some studies have shown that consumers purchase things they really do not want, but then convince themselves they made the right choice

to keep from looking stupid. Advertising agencies readily admit that they are not concerned about what an advertisement says; rather they are concerned about what is heard. This attitude has led to the much heard, "day after recall." That is, do we recall the advertising message? Do you, for example, recall that Maxwell House coffee is "good to the last drop." If so, you are probably more likely to purchase Maxwell than Folgers if you cannot recall Folgers' message. However, with sufficient information on the health hazards of coffee, it is quite possible you would not purchase any coffee.

It has often been said that advertising has two purposes: "The first purpose of an advertisement is to get itself read. The second is a secret" (Albion and Farris, p.2). Ask yourself, is this secret to communicate valuable information to me as a consumer? Or, is it to get me to purchase products irrespective of my needs and desires for them?

We, as consumers, taxpayers, and scientists, should become more cognizant of the advertising messages we hear and begin to evaluate their economic and social value. Advertising expenditures are written off as a business expense and therefore ultimately borne by taxpayers. Should we as taxpayers bear these expenses when such revenues could perhaps yield higher returns on social investments such as education, parks, safe highways, control of delinquency, and basic research? We should begin to provide answers to such questions! To do so, we must begin now to apply our efforts

toward the resolution of the complex issues that surround advertising. It is clear that advertising is not a pure blessing or curse. We, however, must become better informed to say exactly what it is!

Table 1--Allocation of Commodity Check-Off Funds

(FY 1984--Dollars in $000)

	Advertising and Promotion	Research	% Research
Texas Citrus	$ 1,003	$ 5	.49
Florida Limes	242	1	.41
Florida Avocados	280	1	.36
California Nectarines	1,711	35	2.0
" Peaches	1,052	31	2.9
" Pears	712	11	1.5
" Plums	1,388	31	2.2
Washington Cherries	15	.25	1.6
Hawaii Papayas	300	30	9.1
California Olives	1,520	37	2.4
Idaho-Oregon Onions	246	42	14.6
Texas Onions	50	99	66.4
Florida Celery	56	5	8.2
Texas Melons	50	5	9.1
California Almonds	5,750	343	5.6
Totals	$14,375	$676.25	4.5

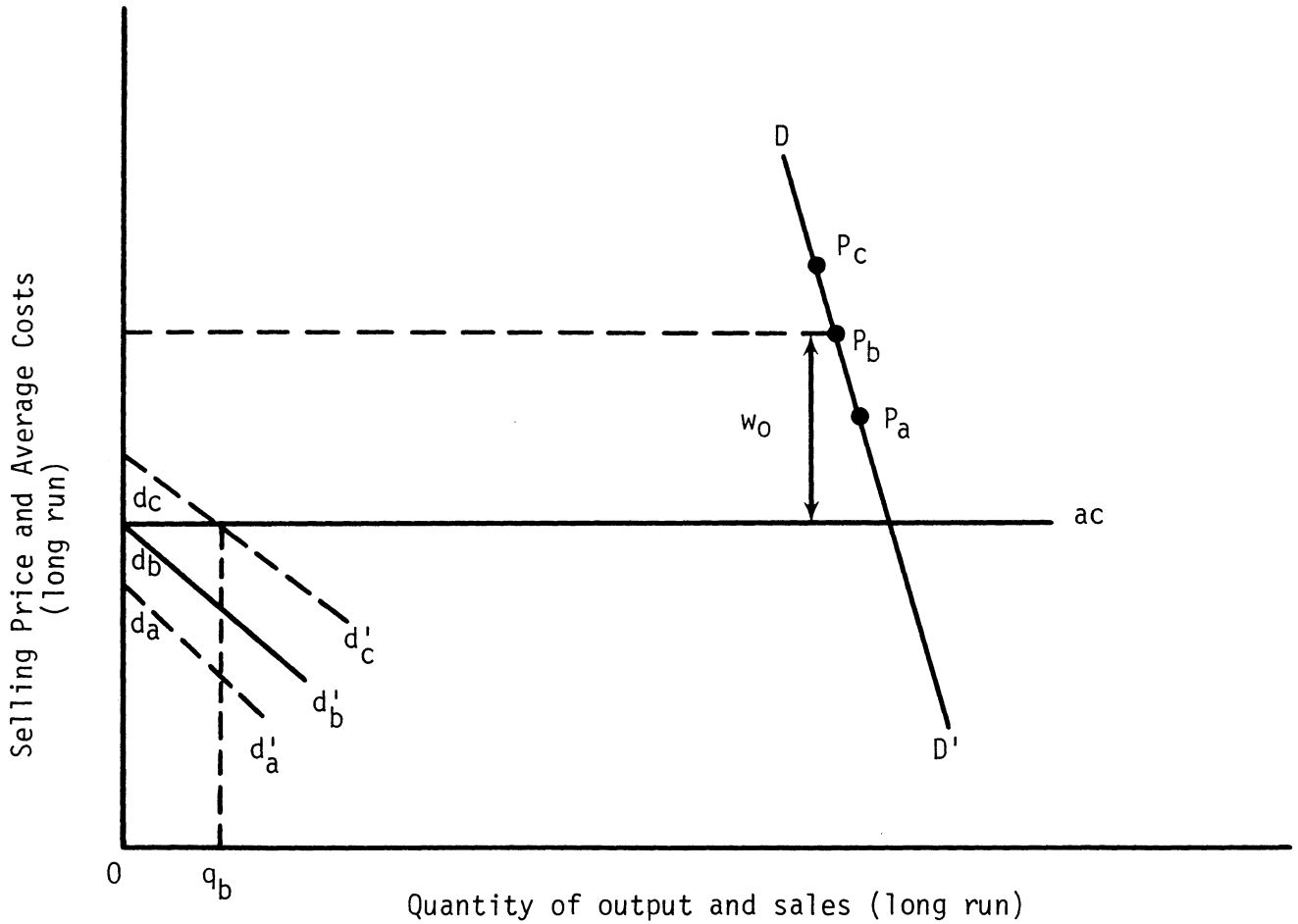
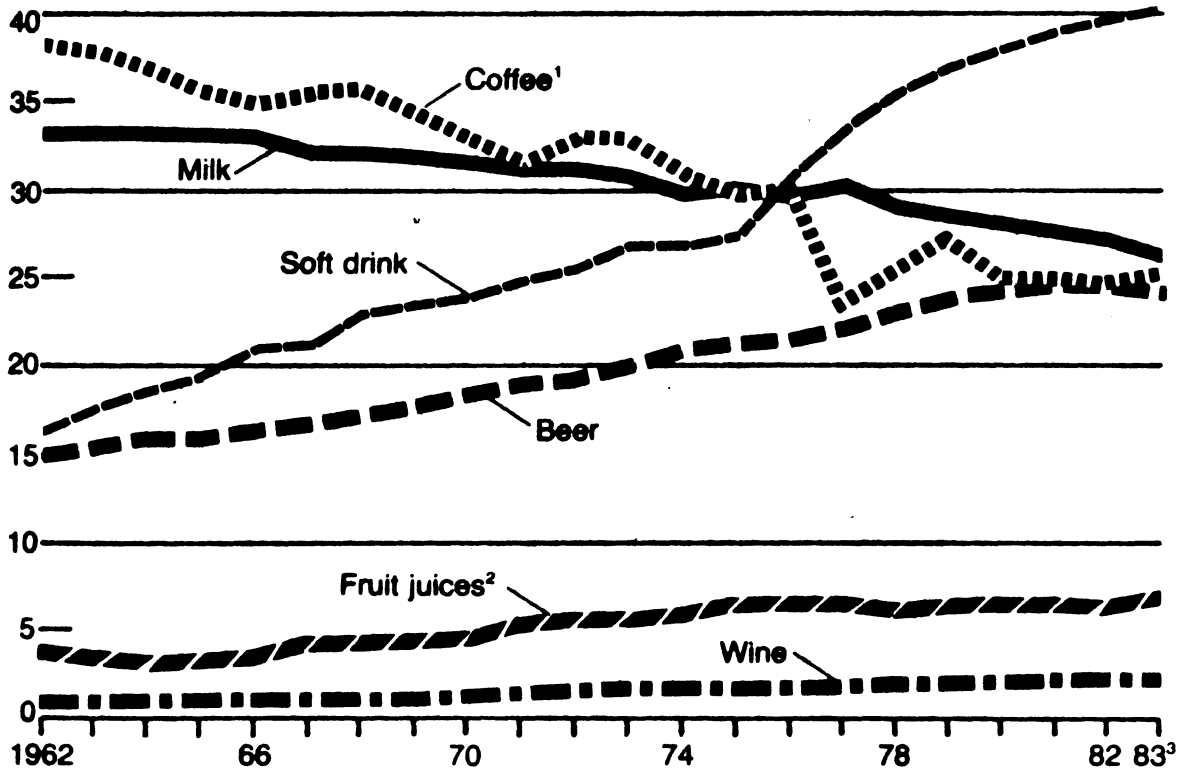


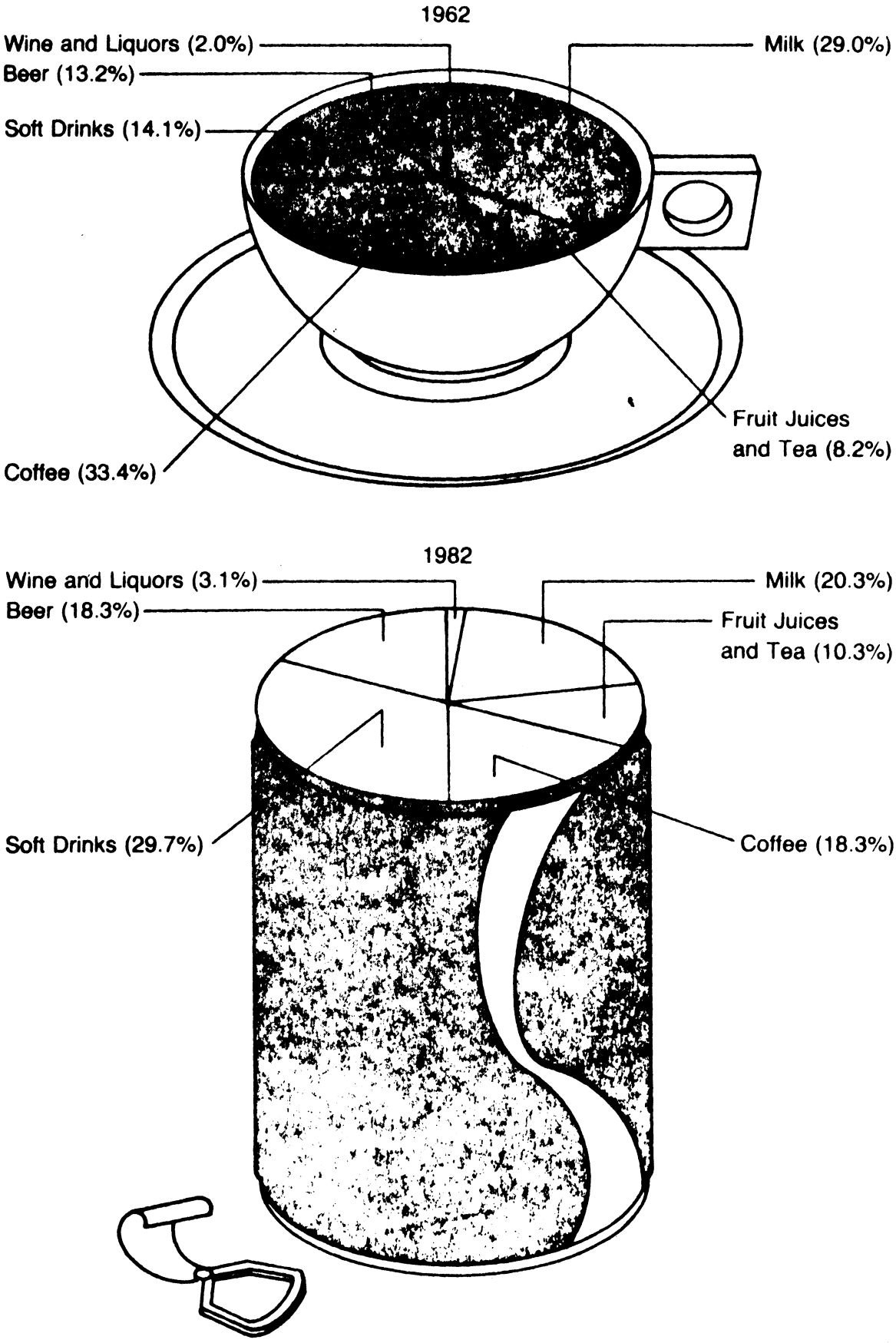
Figure 1. Effects of Product Differentiation Advantages on Product Prices and Firm Entry

Figure 2. Per Capita Beverage Consumption



[1]Ground coffee converted to fluid equivalent on the basis of 60 6 oz cups per pound; the conversion factor for tea is 200 6 oz cups per pound leaf equivalent.
[2]Excluding tomato and other vegetable juices.
[3]Preliminary.

Figure 3. Beverage Market Shifts to Soft Drinks



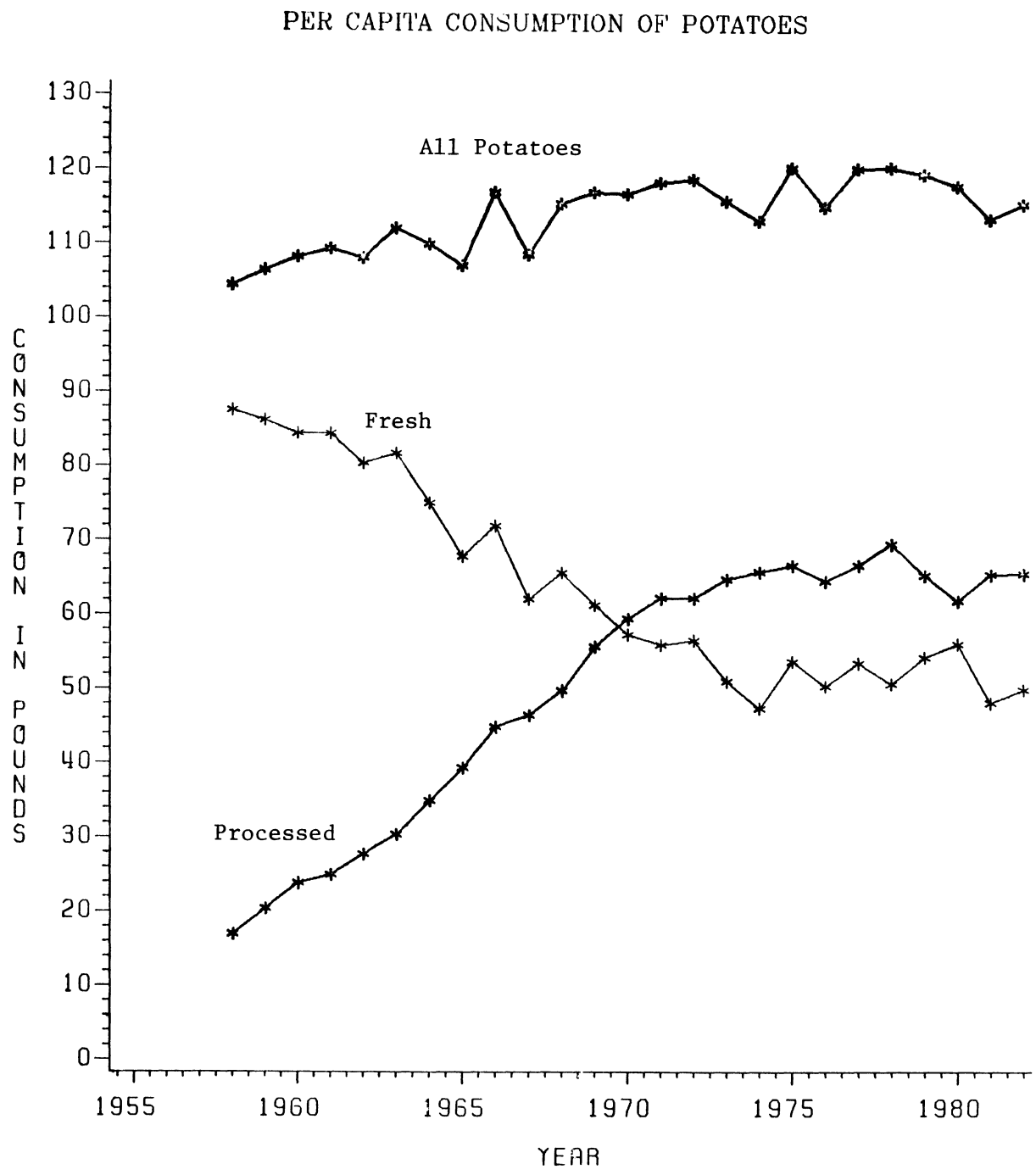


Figure 4 -- Per Capita Consumption of Fresh and Processed Potatoes, 1958-82.

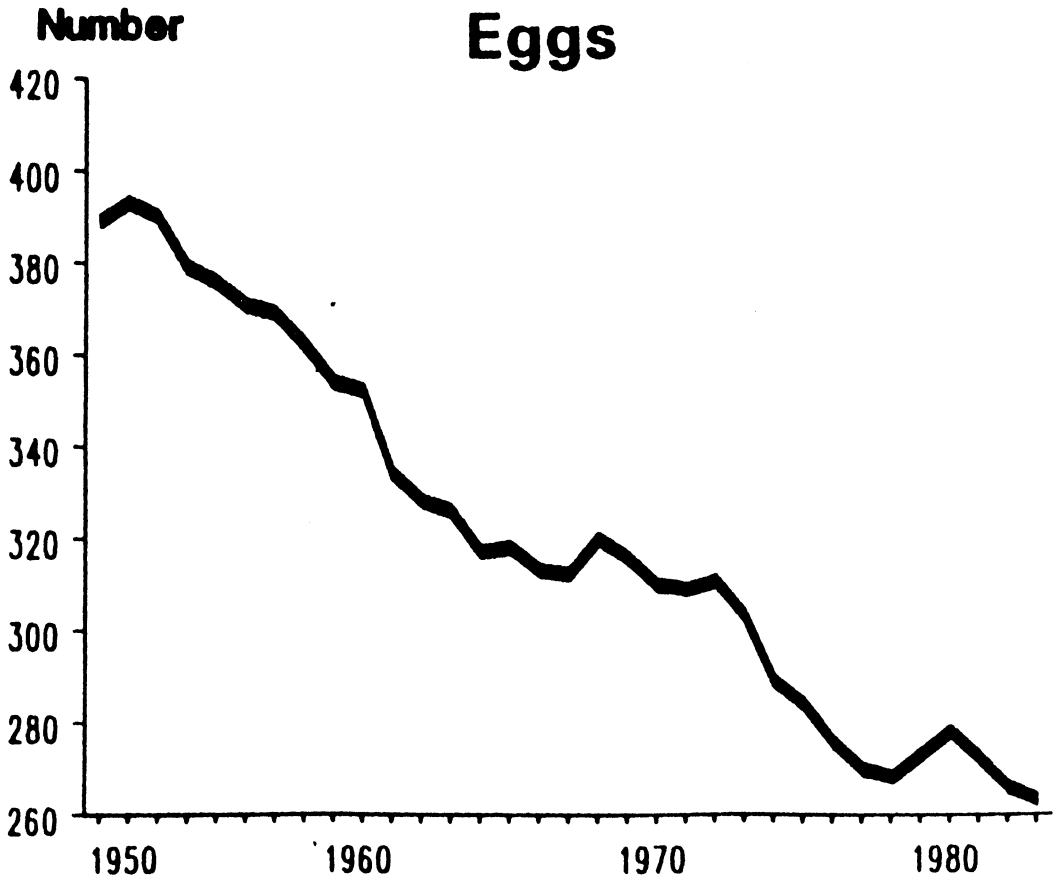


Figure 5. Per Capita Consumption of Eggs

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